Air Force DMT Roadmap

Direction

- In January, MS&A Caucus directed the IPT to deliver:
  - DMT Roadmap and draft Funding Plan in June
  - Correlated Funding Plan in Sep, in time for consideration in the FY02 POM cycle
- Directed focus:
  - AEF Preparation
  - Harvest “low hanging fruit” in the near term

Parameters

- Capstone Requirements Document:
  - Ensure interoperability among MAJCOM distributed assets
  - Eliminate redundant cost whenever and wherever possible

Mission: Provide combat and combat support forces a realistic environment, capable of supporting the entire spectrum from individual training up to campaign-level mission r

AF DMT Roadmap

- Two elements:
  - MAJCOM Training Implementation Plans
  - Technology Investment Strategy

ACC Training Implementation Plan

Platform	FY99	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07
F-15A/C	**Eglin** * **Langley** *		Mt Home Portland	Lakenheath Kadena Nellis New Orleans St Louis	Elmendorf Hickam Jacksonville Otis				
E-3			**Tinker*** Tyndall	Elmendorf Kadena Tyndall (x4)	Tinker (x2) Tyndall	Tinker (transportable)			
F-16 Blk 50			**Shaw** *	Mt Home Nellis	Misawa Spangdahlem				
RQ-1			**Nellis** *						
B-1				Dyess	Ellsworth	McConnell Mt Home	Robins		
E-8				Robins					
F-15E					Lakenheath Seymour J	Elmendorf Mt Home	Nellis		
F-16 Blk 30					Cannon	Sioux City, IA Springfield, OH	Buckley Carswell Dannelly, AL Hancock, NY Hill Kunson Richmond, VA	Capital, IL Homestead Hulman, IN Luke Selfridge, MI Truax, WI	Andrews, MD Joe Foss, SD
RC-135					Offutt				
A-10						Davis-Monthan	Pope	Eielson Osan Spangdahlem	Barnes, MA Boise, ID
B-2						Whiteman			
F-16 Blk 40						Hill Luke Nellis	Aviano Eielson Kunsan Moody Osan	Des Moines, IA Luke Toledo, OH	Kirtland Tulsa, OK
B-52							Barksdale	Minot	
EC-130 (Compass Call)							Davis-Monthan		
F-22							2 Sites		2 Sites
F-117								Holloman	
ABL								1 Site TBD	

Training Implementation Plans

ACC Training Implementation Plan

AETC Training Implementation Plan

AFSPC Training Implementation Plan

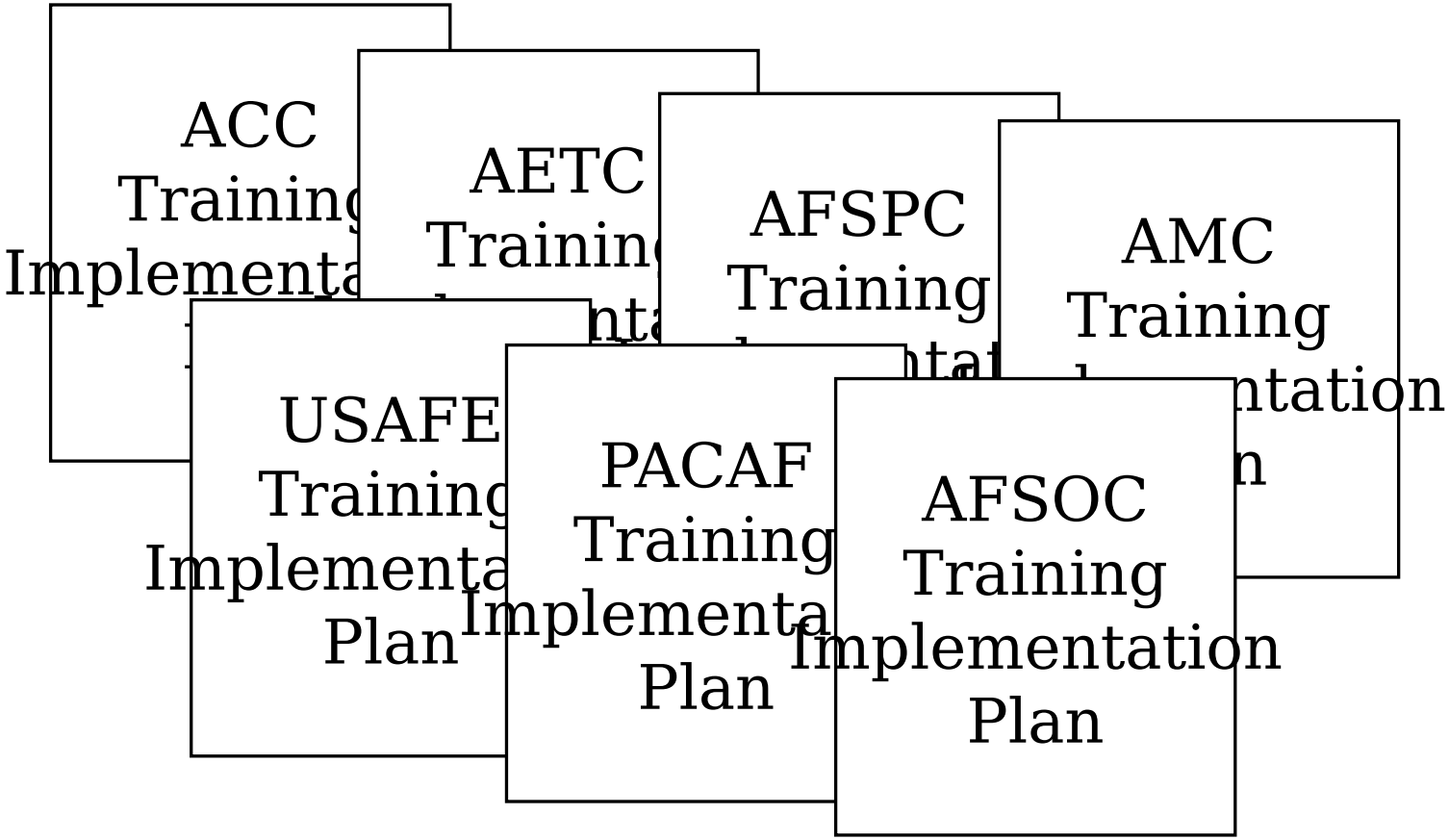
AMC Training Implementation Plan

USAFE Training Implementation Plan

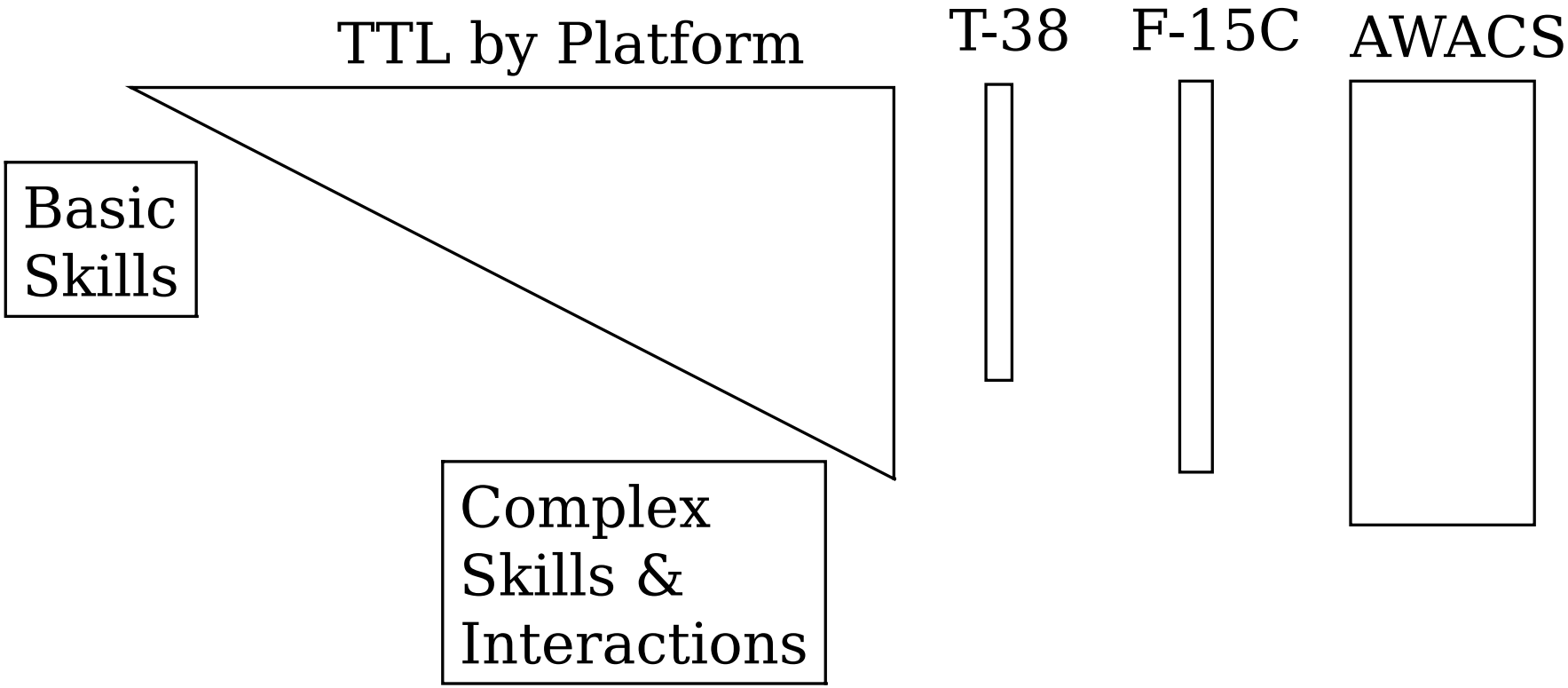
PACAF Training Implementation Plan

AFSOC Training Implementation Plan

Training Implementation Plans



Technology Investment Strategy



TTL Relates to Operational Tra

INTERCEPTS

15.00. Basic Intercepts (Single Target)
- 15.01.Head on Aspect Target
- 15.02.Front Quarter Aspect Target
- 15.03.Beam Aspect Target
- 15.04.Low Altitude Targets
- 15.05.Low Fast Flier
- 15.06.High Speed, Very High Altitude Target
- 15.07.Low Altitude, Low Airspeed Targets

16.00. Tactical Intercept (1vx, 2vx and 4vx)
- 16.01.Intercept Execution

COMBAT MANEUVERING

- 02.12.Combat Turns
- 07.02.04.Pirouette to Separation
- 07.02.05.Break Turn Exercise
- 07.02.09.Vertical Turn Performance Exercise (Simulated Jink)
- 07.02.10.High Airspeed Heading Reversal
- 12.10.06.Fight Reentry Exercise
- 12.10.09.Lead Turn Exercise
- 12.10.10.Ditch Exercise
- 12.10.11.Roll Slide Exercise
- 12.04.12.Snatchback Gun Exercise
- 12.10.17.Pursuit Curve Exercise

19.00. Stern Conversions
- 19.01.Conversion Execution
- 19.01.01.Horizontal
- 19.01.02.Chandelle
- 19.01.03.Slicing
- 19.01.04.VI Mode
- 19.01.05.Low Altitude, Low Airspeed Conversion
- 19.01.06.Low Altitude
- 19.01.07.01.Point Parallel
- 19.01.07.02.Fighter Turn on
- 19.01.08.No Lock Conversion
- 19.01.09.Vertical Conversion

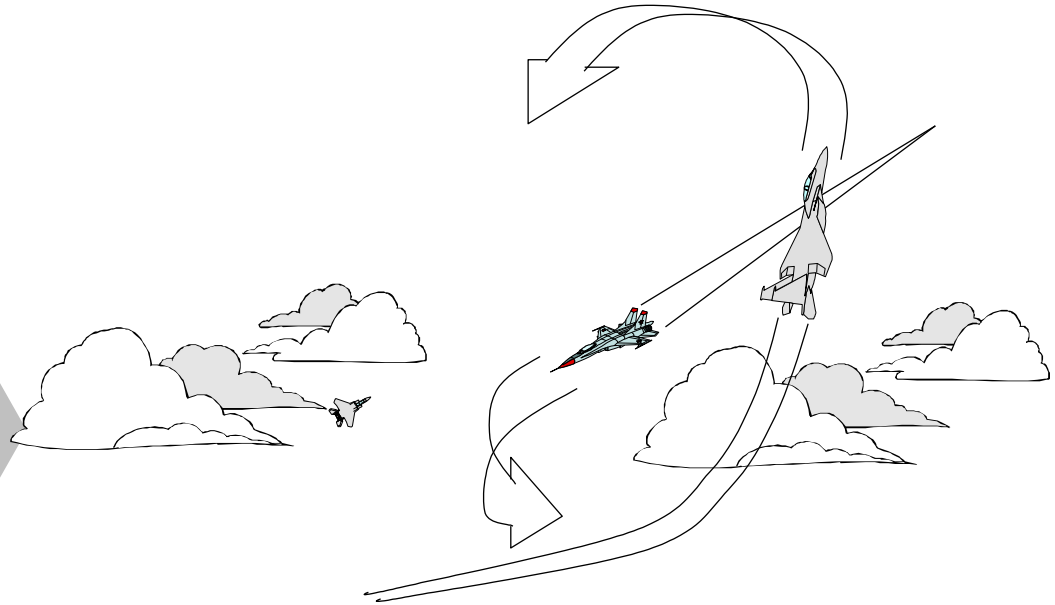
20.00. Visual Maneuvering (2vx and 4vx)
- (no entries)

21.00. Offensive Air Combat Maneuvers (OACM)
- 21.01.Engaged Maneuvering
- 21.02.Support Maneuvering
- 21.03.Fight Reentry

22.00. Defensive Air Combat Maneuvers (DACM)
- 22.02.Engaged Maneuvering
- 22.03.Support Maneuvering
- 22.04.Fight Reentry

23.00. Offensive Basic Fighter Maneuvers (OBFM)
- 23.01.Offensive Perch Setups
- 23.02.Fight Analysis
- 23.03.Maneuver Selection
- 23.04.Maneuvering Mechanics
- 23.05.Weapons Engagement Zone (WEZ) Recognition

24.00. Defensive Basic Fighter Maneuvers (DBFM)
- 24.01.Defensive Perch Setups
- 24.02.Fight Analysis



PROBLEM: TTL Does Not Relate to Technical Requirements

INTERCEPTS

15.00. Basic Intercepts (Single Target)
- 15.01. Head on Aspect Target
- 15.02. Front Quarter Aspect Target
- 15.03. Beam Aspect Target
- 15.04. Low Altitude Targets
- 15.05. Low Fast Flier
- 15.06. High Speed, Very High Altitude Target
- 15.07. Low Altitude, Low Airspeed Targets

16.00. Tactical Intercept (1vx, 2vx and 4vx)
- 16.01. Intercept Execution

COMBAT MANEUVERING
- 02.12. Combat Turns
- 07.02.04. Pirouette to Separation
- 07.02.05. Break Turn Exercise
- 07.02.09. Vertical Turn Performance Exercise (Simulated Jink)
- 07.02.10. High Airspeed Heading Reversal
- 12.10.06. Fight Reentry Exercise
- 12.10.09. Lead Turn Exercise
- 12.10.10. Ditch Exercise
- 12.10.11. Roll Slide Exercise
- 12.04.12. Snatchback Gun Exercise
- 12.10.17. Pursuit Curve Exercise

19.00. Stern Conversions
- 19.01. Conversion Execution
- 19.01.01. Horizontal
- 19.01.02. Chandelle
- 19.01.03. Slicing
- 19.01.04. VI Mode
- 19.01.05. Low Altitude, Low Airspeed Conversion
- 19.01.06. Low Altitude
- 19.01.07.01. Point Parallel
- 19.01.07.02. Fighter Turn on
- 19.01.08. No Lock Conversion
- 19.01.09. Vertical Conversion

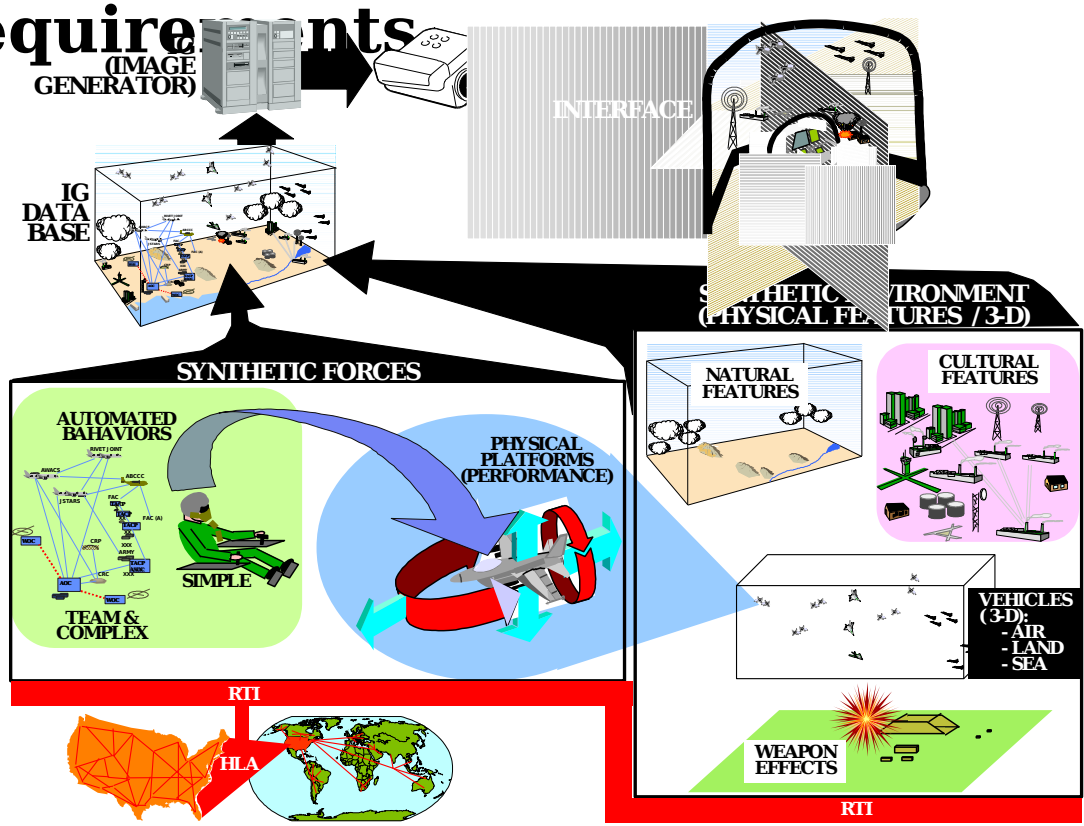
20.00. Visual Maneuvering (2vx and 4vx)
- (no entries)

21.00. Offensive Air Combat Maneuvers (OACM)
- 21.01. Engaged Maneuvering
- 21.02. Support Maneuvering
- 21.03. Fight Reentry

22.00. Defensive Air Combat Maneuvers (DACM)
- 22.02. Engaged Maneuvering
- 22.03. Support Maneuvering
- 22.04. Fight Reentry

23.00. Offensive Basic Fighter Maneuvers (OBFM)
- 23.01. Offensive Perch Setups
- 23.02. Fight Analysis
- 23.03. Maneuver Selection
- 23.04. Maneuvering Mechanics
- 23.05. Weapons Engagement Zone (WEZ) Recognition

24.00. Defensive Basic Fighter Maneuvers (DBFM)
- 24.01. Defensive Perch Setups
- 24.02. Fight Analysis



DMT TTL Translators

1. NATURAL LIGHTING AND CONTRAST
1.1. Sun & Moon
1.1.1. Location/position in sky
1.1.2. Brightness/illumination
1.1.3. Heating effects
1.1.4. Importance of precise coordination among the different networked simulators
1.2. Visibility
1.2.1. Maximum distance accurately derived
1.2.2. Cloud properties accurately specified
1.2.2.1. Dimensions
1.2.2.2. Location
1.2.2.3. thickness (visibility factor)
1.2.3. Obscurants (i.e., smoke and dust)
1.3. Importance of Precise Coordination Among the Different Networked Sims

2. PHYSICAL PROPERTIES OF FIGHTERS
2.1. Accurate Modeling Attributes
2.1.1. Aerodynamic performance
2.1.2. Combat and support equipment (i.e., radar, RWR, radio)
2.1.3. External characteristics (i.e., radar cross section, engine IR signatures)
2.2. Visual accuracy (3-D) Requirement (Static View)
2.2.1. Maximum range
2.2..2. Long range
2.2..3. Medium range
2.2..4. Close
2.2.5. Very close
2.3. Importance of Precise Coordination Among the Different Networked Sims

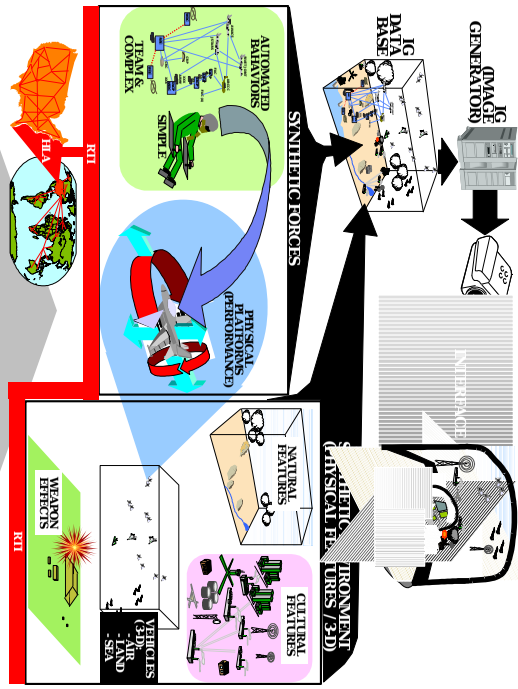
3. PHYSICAL PROPERTIES OF TANKERS
3.1. Accurate Modeling Attributes
3.1.1. Aerodynamic performance
3.1.2. Combat and support equipment (i.e., radar, RWR, radio)
3.1.3. External characteristics (i.e., radar cross section, engine IR signatures)
3.**2. Visual accuracy (3-D) Requirement (Static View)**
3.2.1. Maximum range
3.2..2. Long range
3.2..3. Medium range
3.2..4. Close
3.2.5. Very close
3.3. Importance of Precise Coordination Among the Different Networked Sims

4. PHYSICAL PROPERTIES OF C4I/SUPPORT AIRCRAFT
4.1. Accurate Modeling Attributes
4.1.1. Aerodynamic performance
4.1.2. Combat and support equipment (i.e., radar, RWR, radio)
4.1.3. External characteristics (i.e., radar cross section, engine IR signatures)
4.**2. Visual accuracy (3-D) Requirement (Static View)**
4.2.1. Maximum range
4.2.2. Long range
4.2.3. Medium range
4.2.4. Close
4.2.5. Very close
4.3. Importance of Precise Coordination Among the Different Networked Sims

5. PHYSICAL PROPERTIES OF GROUND VEHICLES
5.1. Accurate Modeling Attributes
5.1.1. Aerodynamic performance
5.1.2. Combat and support equipment (i.e., radar, RWR, radio)
5.1.3. External characteristics (i.e., radar cross section, engine IR signatures)
5.**2. Visual accuracy (3-D) Requirement (Static View)**
5.2.1. Maximum range
5.2.2. Long range
5.2.3. Medium range
5.2.4. Close
5.2.5. Very close
5.3. Importance of Precise Coordination Among the Different Networked Sims

6. MAXIMUM NUMBER OF VEHICLES (AIRCRAFT, TANKS/APC'S, ETC.) DISPLAYED AT ANY ONE TIME
6.3.1. Over 1000
6.3.2. 500 - 1000
6.3.3. 300 - 500
6.3.4. 100 - 300
6.3.5. 50 - 100
6.3.6. 25 - 50
6.3.7.10 - 25
6.3.8. 5 - 9
6.3.9. 1-4

7. FLIGHT "FEEL" REQUIREMENTS
7.1. Partial Movement (as in Instrument Flight)
7.2 Full Movement (as in Maneuvering)
7.3. Buffeting
7.4. "G" Forces



TTL's

INTERCEPTS
15.00. Basic Intercepts (Single Target)
15.01.Head on Aspect Target
15.02.Front Quarter Aspect Target
15.03.Beam Aspect Target
15.04.Low Altitude Targets
15.05.Low Fast Flier
15.06.High Speed, Very High Altitude Target
15.07.Low Altitude, Low Airspeed Targets
16.00. Tactical Intercept (1vx, 2vx and 4vx)
16.01.Intercept Execution

COMBAT MANEUVERING
02.12.Combat Turns
07.02.04.Pirouette to Separation
07.02.05.Break Turn Exercise
07.02.09.Vertical Turn Performance Exercise (Simulated Link)
07.02.10.High Airspeed Heading Reversal
12.10.06.Fight Reentry Exercise
12.10.09.Lead Turn Exercise

The AEF Challenge

CAN THESE UNITS TRAIN TOGETHER?

MAIN FORCE
15 F-15C
10 F-15E
8 F-16CJ
12 A-10 (6 ANG Units)
(EA-6B -- TBD)
3 E-3 AWACS
3 HH-60
8 C-130 (SOF Refueling)
4 KC-10
3 KC-135
4 C-21

HIGH VALUE, NOT DEPLOYED, ON CALL IN THE U.S.
6 B-52/B-1
3 B-2
6 F-117

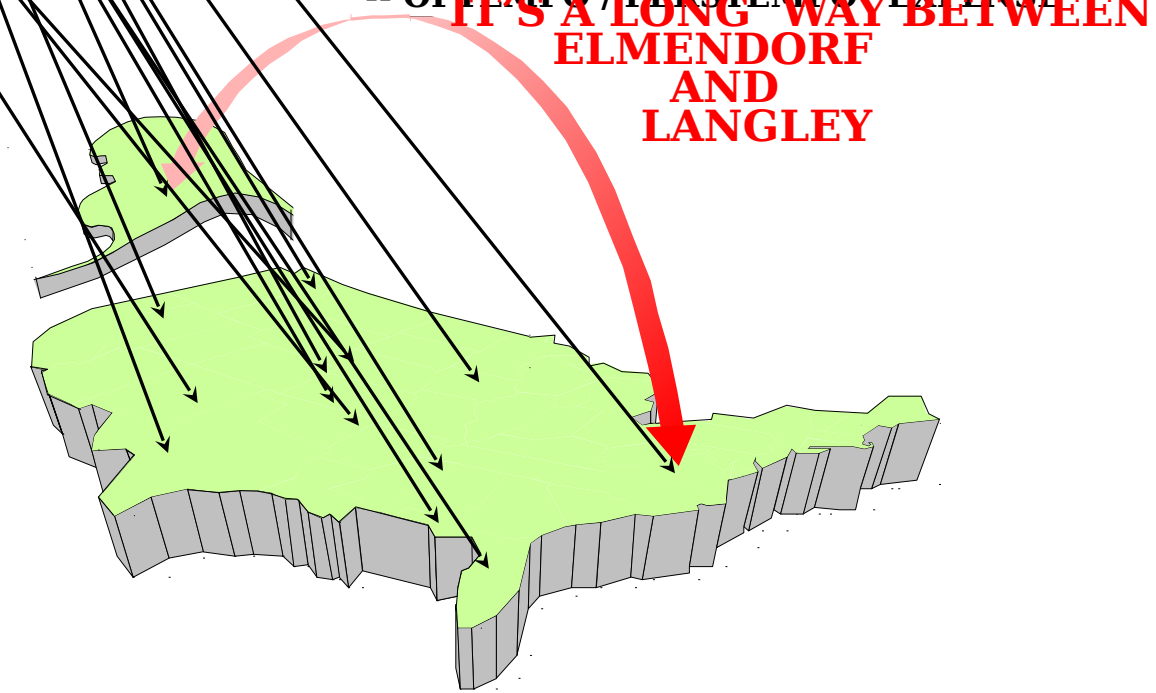
AVAILABLE ON REQUEST
3 E-3 AWACS
(2??) E-8 Joint STARS
(2??) RC-135 Rivet Joint
(2??) EC-130 Compass Call
(2??) ABCCC
(2??) U-2 Reconnaissance & Ground Stations

TRAINED FOR A YEAR WITH THE AEF FORCE BUT NOT DEPLOYED (ON CALL)
6 F-15C
14 F-15E
10 F-16CJ
14 A-10 (ANG Units)
9 HH-60
10 C-130 (SOF Refueling??)
2 KC-10
7 KC-135 (Reserve)
7 KC-135 (ANG)
6 C-21

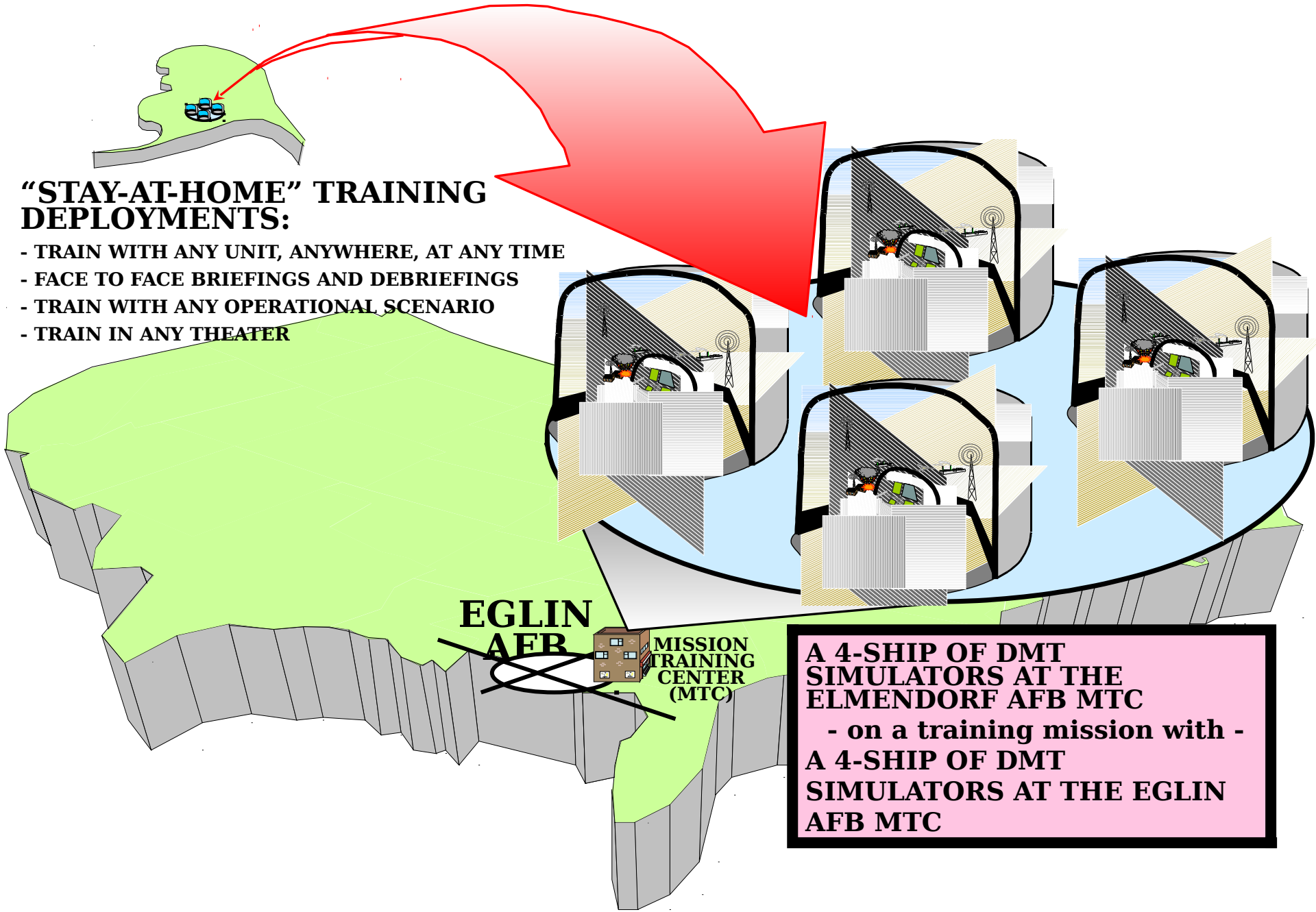
ADDITIONAL FORCES FROM A PRESIDENTIAL SELECTIVE RESERVE CALL-UP

DO THE FOLLOWING CONSIDERATIONS ALLOW UNITS (AND THE ENTIRE AEF ON OCCASION) TO TRAIN TOGETHER?:

- BASES LOCATIONS CONVENIENTLY CLOSE TO EACH OTHER
- AIRSPACE / RANGE TYPE, SIZE, AND AVAILABILITY
- FACE-TO-FACE BRIEFING & DEBRIEFING
- AMOUNT OF "DRONE TIME" TO A MUTUALLY ACCEPTABLE AREA
- EXPENSE OF DEPLOYMENTS IN ORDER TO TRAIN TOGETHER:
  - -- $$ EXPENSE
  - -- OPTEMPO / PERSTEMPO "EXPENSE"



AEF / DMT: "STAY-AT-HOME" DEPLOYMENTS



“Aggressive…Ambitious”

- No doubt, but...
  - The right crowd has now been assembled
  - The draft Roadmap has been underway for nearly a year
- The bottom line: The Co-Chairs require your support and that of your Working Group members